Montana Fish Wildlife & Parks (FWP)
Region One: Northwest Montana
Wildlife Status Update: May 2016

In northwest Montana, FWP wildlife biologists work to survey and manage big game species such as black bear and elk, furbearers such as bobcat and marten, and many other mammal and bird species. We've prepared this update to better inform interested members of the public on the population status of selected species and how they are managed.

In this issue, we look at the management status, hunting harvest, and ecology of black bears, as well as surveys and population status of white-tailed deer, mule deer, elk, and bighorn sheep.

For more information or questions on any of the information in this document, please contact FWP Region One Wildlife Program Manager Neil Anderson via e-mail (nanderson@mt.gov) or phone (406-751-4585).

White-tailed deer in winter (FWP photo).

Black Bears In Northwestern Montana

By Tonya Chilton-Radandt, Libby area Wildlife Biologist

Montana offers world-renowned, fair-chase black bear hunting, and black bears are a highly treasured big game animal in Montana. From the high-density bear populations of the maritime, forested northwest corner of the state, to the dry, rugged country in southeast Montana, black bear hunters and enthusiasts enjoy a variety of season types and viewing opportunities. Montana's annual black bear harvest has averaged 4th in the nation behind Washington, Oregon, and Idaho in numbers of bears harvested.

MFWP estimates that more than 20,000 black bear licenses are sold in Montana annually, and roughly 10,000 people spend 90,000-100,000 days hunting to harvest approximately 1,000 black bears statewide. In 1985, Montana Fish, Wildlife & Parks (MFWP) instituted a mandatory check of all harvested black bears to help track harvest rates and population status. Hunters in Region 1 harvest approximately half of the statewide average (Fig. 1).

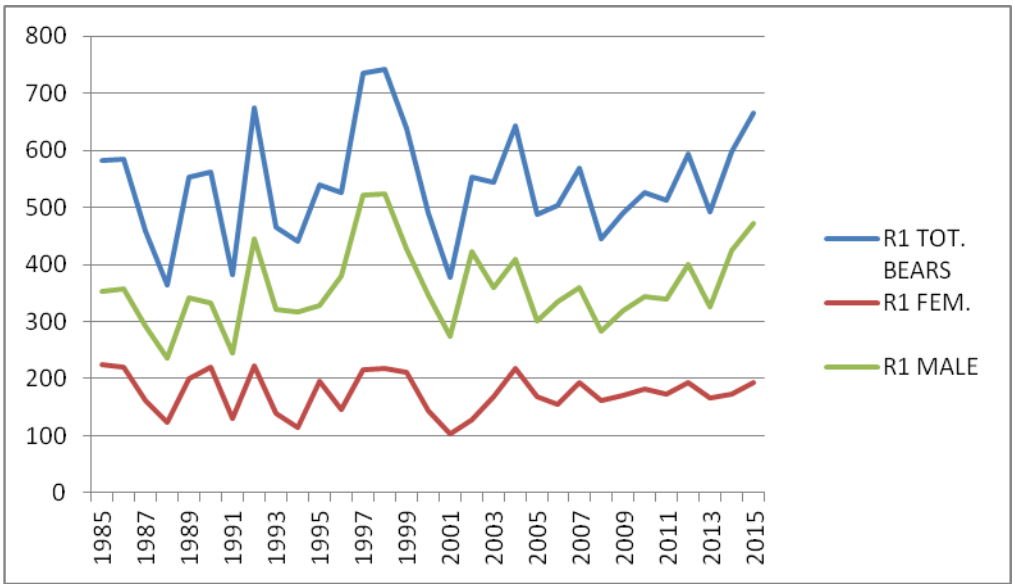
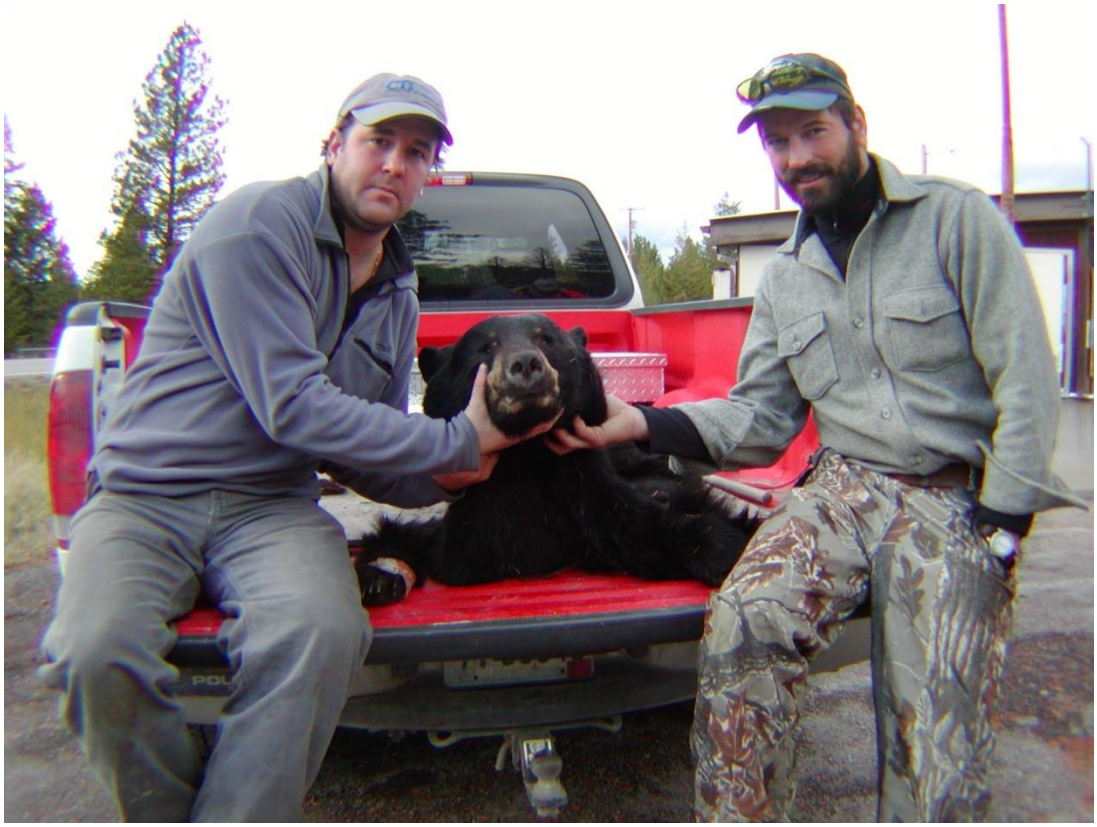


Figure. 1. Female, male, and total number of black bears harvested annually in MFWP Region 1, Montana (1985-2015).

In the early 1990s, controversy over recreational harvest of black bears reached a zenith. Public harvest of grizzly bears had recently been halted by a federal court that determined that the state of Montana did not have adequate data to suggest that recreational harvest was not impacting grizzly populations, and some stakeholders argued the same could be true for black bears in Montana. As a result of increasing controversy, MFWP initiated public scoping and the environmental impact assessment (EIS) process to update management efforts for black bears.



Successful black bear hunters (FWP photo).

The EIS, completed in 1994, summarized research findings from nearby states (e.g., Washington and Idaho) to set the subsequent direction for black bear management in Montana. Biological benchmarks were established to ensure that the harvest of adult females was conservative. By the late 1990s, MFWP research biologists evaluating these harvest criterions found that, in many cases, although the benchmarks were being exceeded, black bear harvest numbers appeared sustainable. However, concerns over black bear harvest remained an issue.

As a result of increasing questions, MFWP initiated the Black Bear Research Program (BBRP) in 2000. The BBRP used a variety of methods, including trapping and collaring bears, as well as DNA hair snagging, to:

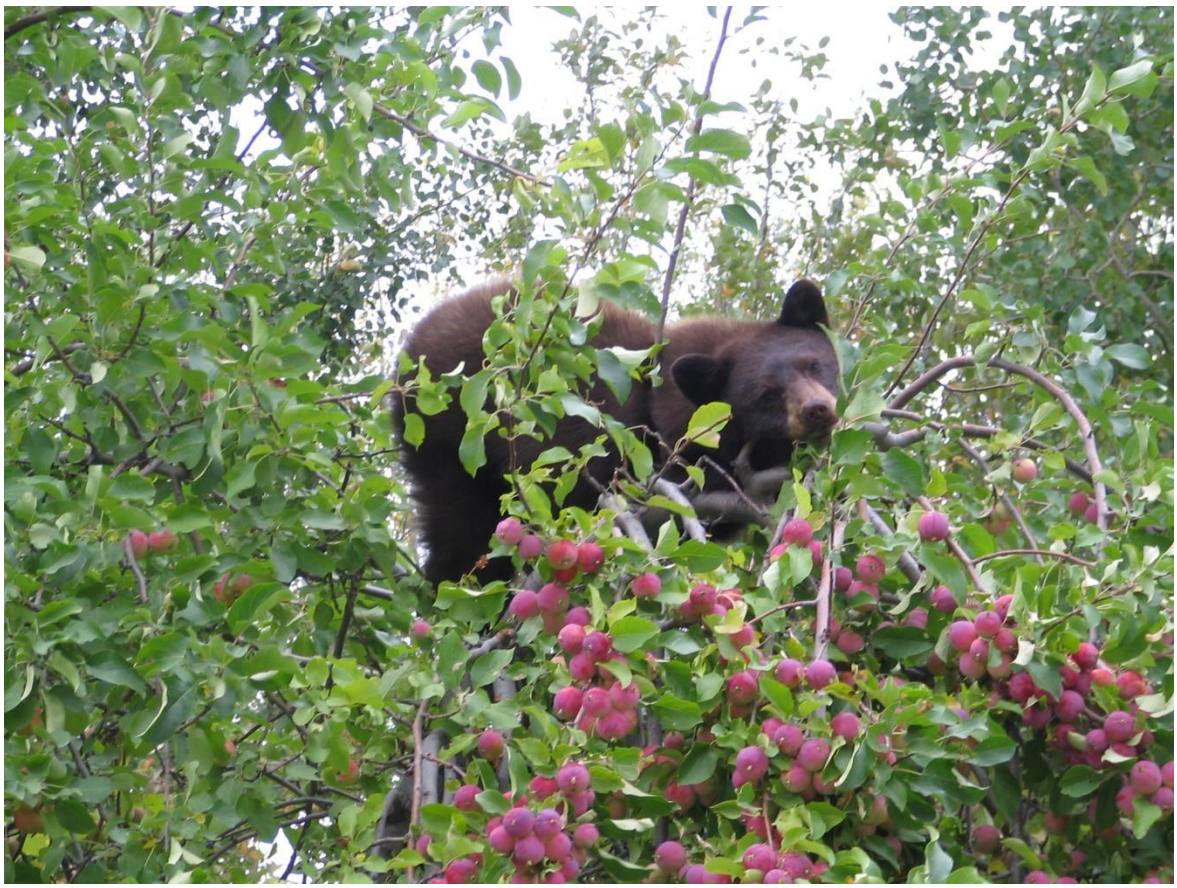
1. Estimate black bear population size, and
2. Evaluate harvest rates (at both BMU and statewide levels).

Both sources of information can now be combined to estimate Montana's total sustainable mortality rate, or the total number of mortalities allowed before population-level declines. Area wildlife biologists can now use the density, population size, and harvest rate information, specific to their respective areas, to help them manage black bear populations on a finer scale than was historically possible.

In 2015, 666 total black bears (including 193 female and 473 males) were legally harvested in MFWP's Region 1. Numbers of harvested bears has not exceeded 600 since 2004 (when 642 total black bears were harvested). In addition to high harvest

numbers, a high number of bears were killed in conflicts with humans and for other nonharvest reasons. Approximately 53 black bears were killed for management (conflict) reasons, in collisions with vehicles, or illegally harvested in 2015, compared to only 31 in 2014.

Berries, such as huckleberries, mountain ash, elderberry, etc., make up the majority of the black bears' diet in Region 1. For the past two years, berry crops were relatively healthy and yielded high densities of berries, which likely also led to a higher density of black bears across the region. However, a persistent statewide drought threatens to reduce berry production this year, which could lead to increasing bear-human conflicts in 2016. Residents are advised to remove all odorous substances that can draw bears, such as bird feeders, garbage, pet food, and chicken and livestock feed. You may also visit MFWP's website for more information on Living with Black Bears: http://fwp.mt.gov/fishAndWildlife/livingWithWildlife/blackBears/default.html.



Black bear in fruit tree near Eureka (FWP photo).

2016 Big Game Surveys and Population Status in Region 1

by R1 Wildlife Staff

Spring means more than warmer weather and rain to the biologists at FWP. It is also the time of year when we complete surveys for elk, deer, and bighorn sheep. Every year biologists conduct what we call “green-up” surveys. The surveys are timed with early spring green-up when elk, deer, and sheep congregate in open areas and are more visible. Surveys for elk, sheep, and mule deer are conducted with a helicopter, while surveys for white-tailed deer are conducted on the ground by driving several transects in each hunting district. Regardless of the method used, the goal is the same – count the numbers of animals observed and classify them into groups consisting of adults and juveniles, if possible. This information is used to evaluate population trends, inform the public on how populations are doing, and to make harvest recommendations to the FWP Commission. One of the most important things we look at is recruitment, or the number of young of the year that survived through the winter and will be recruited into the population as yearlings. Survey data gives biologists an idea if the population is increasing, decreasing, or remaining somewhat stable. This information is presented as the ratio of juveniles per 100 adults, or the percentage of juveniles in relation to the number of adults observed. Surveys aren’t conducted everywhere, but biologists look at key areas that provide insight into what is likely happening across the region.

White-tailed Deer Surveys

White-tailed deer are the most abundant and sought-after big game species in Region 1. Populations are largely controlled by winter and early spring weather. Populations were low in 2010 following rough winters, but have steadily increased over the last 5 years due to mild winters and good survival of fawns (Figure 1). In 2016, fawn recruitment ranged from 37 fawns per 100 adults in the Swan (HD 130) to 62 fawns per 100 adults in HD 170 near Kalispell. Recruitment rates ranging from the mid 30s to over 50 fawns per 100 adults indicate the population is increasing and could potentially double over the next 2 to 3 years. The observed increase in whitetail fawn recruitment over the last few years indicates an increasing population that allows for greater viewing and harvest opportunity. For the 2016 general hunting seasons there will be opportunities for hunters to harvest an antlerless whitetail on a general license as well as additional antlerless whitetail licenses available in some districts. Hunters are encouraged to look for these changes in the 2016 Elk, Deer and Antelope hunting regulations.

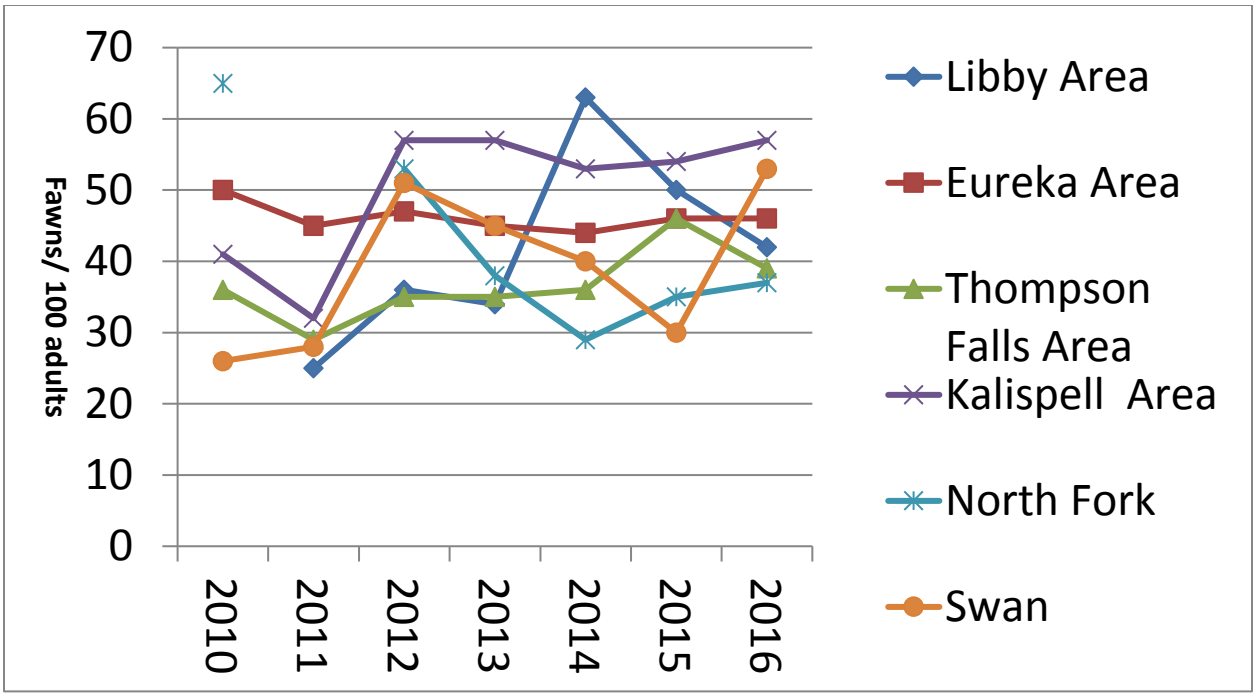


Figure 1. White-tailed deer fawn recruitment (a ratio of number fawns per 100 adults) based on spring survey counts. Recruitment rates are an average for the hunting districts within the Libby Area (HD 100, HD 103, HD 104), Eureka Area (HD 101, HD 102, HD 109), Thompson Falls Area (HD 121, HD 122, HD 123, HD 124) and Kalispell Area (HD 120, HD 132 and HD 170).

Mule Deer Surveys

The picture for mule deer in Region 1 isn't as rosy as it is for white-tailed deer. FWP biologists are concerned with population trends for mule deer in Region 1, and numbers are generally thought to have declined over the last 8 to 10 years. Habitat changes and predation are largely considered reasons for these declines. Mule deer are routinely surveyed by helicopter or by ground in Hunting Districts 103, 109, and 121. Dense timber cover in other areas makes surveys very inefficient so other information, such as harvest rates, is used to evaluate population trends. Although numbers of mule deer seem to be below long-term average, the 2016 recruitment rates in both HDs 109 and 121 are encouraging (Figure 2). Although recruitment has been relatively high for mule deer since 2010, biologists are still concerned with overall population trends for mule deer. As a result, FWP is looking to conduct a research project evaluating habitat use and mortality sources in mule deer in two distinctly different winter range habitats, the Fisher River area and the Whitefish Mountains. Should the project move forward, data from this research will provide valuable information on habitat requirements and potential sources of mortality for mule deer in Northwestern Montana.

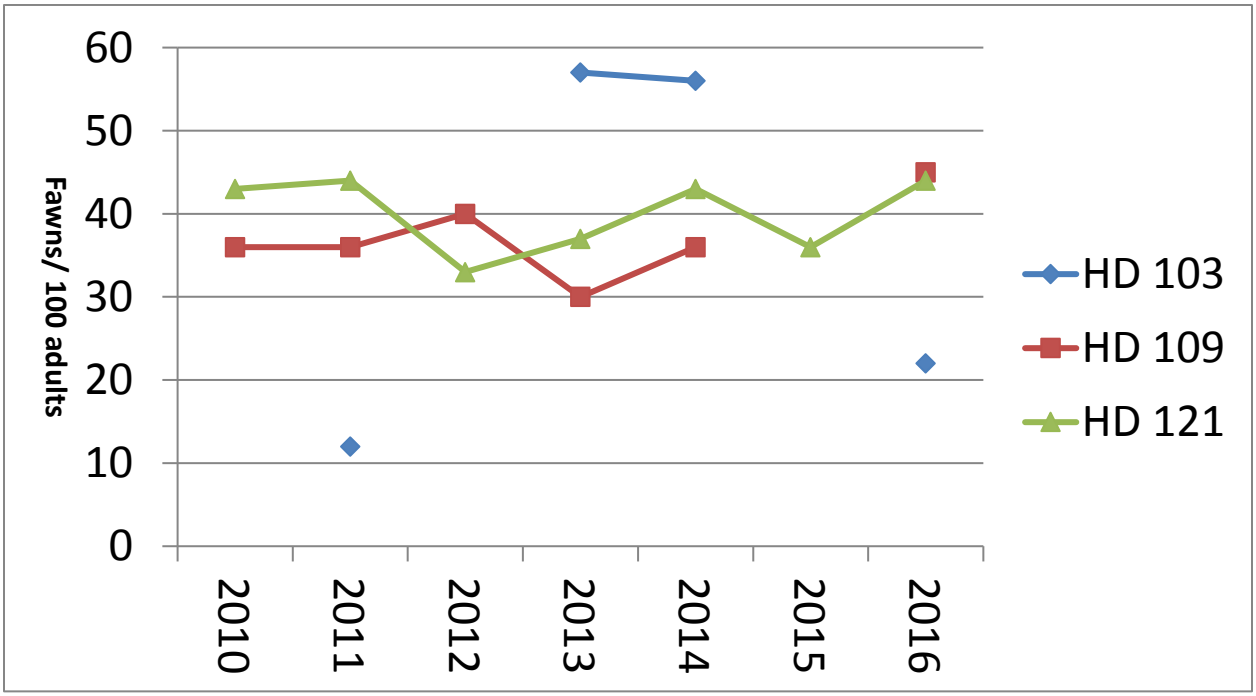


Figure 2. Mule deer fawn to adult ratios from 2010 through 2016 for hunting districts in the Fisher River (HD 103), Galton Range of the Whitefish Mountains (HD 109), and the Thompson Falls area (HD 121).

Elk Surveys

Elk survey flight in the South Fork of the Flathead River (FWP photo).

Many areas in Region 1 are difficult to survey due to tree cover and difficult terrain. However, elk surveys are conducted on a routine basis in HD 103 (Fisher River area), HD 121 (Northwest of Thompson Falls), and HD 140 and HD 150 (Bob Marshall Wilderness). Additional areas are surveyed when budget and helicopter availability allows. Elk are classified into 3 categories during spring surveys: bulls, cows, and calves. Recruitment rates for elk are based on the ratio of calves per 100 cow elk observed. Information from these surveys, along with harvest data, biologist observations, and information from the public, is used to make season recommendations to the FWP Commission. Recruitment rates have varied by hunting district and year. Surveys for elk in 2016 also included a helicopter survey in HD 123 (South of Thompson Falls). Overall, recruitment rates were considered to be good in HD 103, HD 121, and HD 123 (Figure 4). Elk calf recruitment in the Bob Marshall increased to 19 calves per 100 cows, which the highest it has been since 2012. Bull

ratios for elk in all the survey areas ranged between 11 and 15 bulls per 100 cows in 2016 spring green-up surveys.

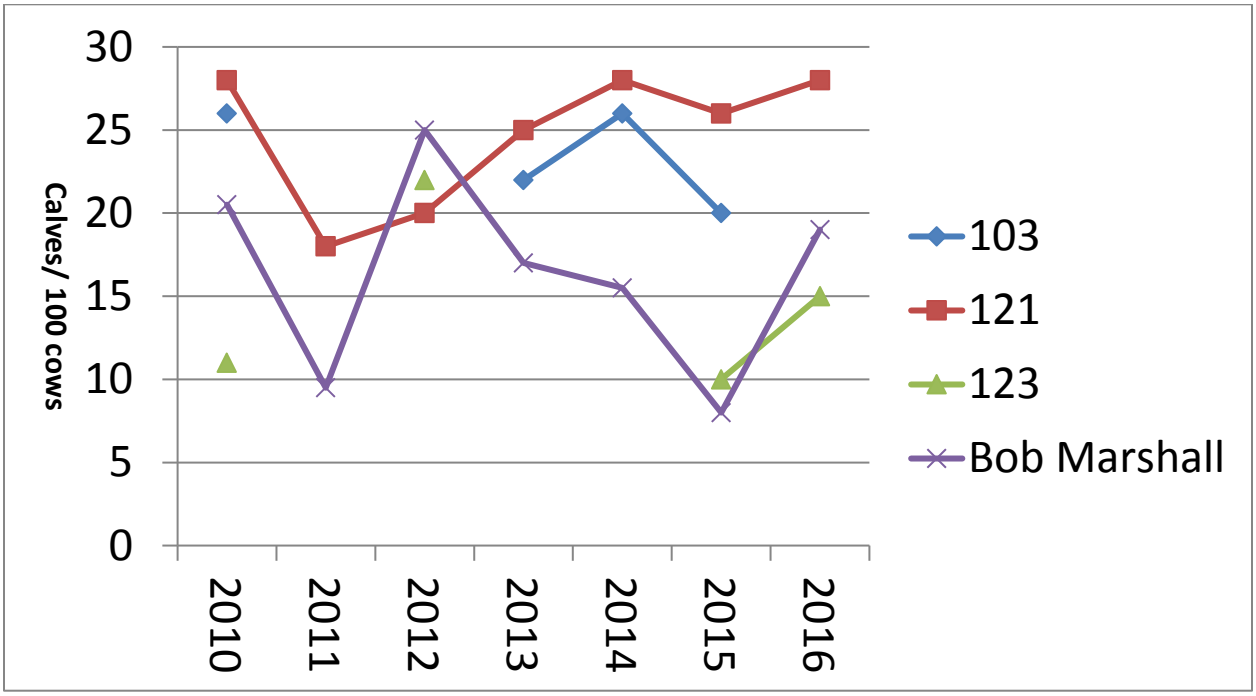


Figure 3. Elk calf:100 cow ratios based on helicopter surveys conducted in the Fisher River (HD 103), Thompson Falls (HD 121 and 123), and Bob Marshall Wilderness (HD 140 and 150) areas.

Bighorn Sheep Survey

Bighorn sheep populations in Region 1 appear to be stable to increasing in several districts, while populations in 2 areas continue to struggle. In 2015, an all age die-off occurred in bighorn sheep Hunting District 122 south and west of Plains, Montana. The population declined from over 100 sheep to approximately 15-18 remaining today. Bighorn sheep persist in the Ural-Tweed herd (HD 101), but only a few sheep remain and the population is in jeopardy. However, sheep numbers in Kootenai Falls (HD 100), Galton Range (HD 102), North Clark Fork (HD 121), Cabinet Mountains (HD 123), and Paradise (HD 124) appear to be stable, although lamb:ewe ratios were fairly low in the Kootenai Falls herd this year. Total numbers increased in the North Clark Fork from 33 observed sheep in 2013 to 55 in 2016, which is encouraging, as 106 bighorn sheep were counted in that area in 2005. The population had steadily declined over the course of the last 10 years.

Big horn sheep near Thompson Falls (FWP Photo).

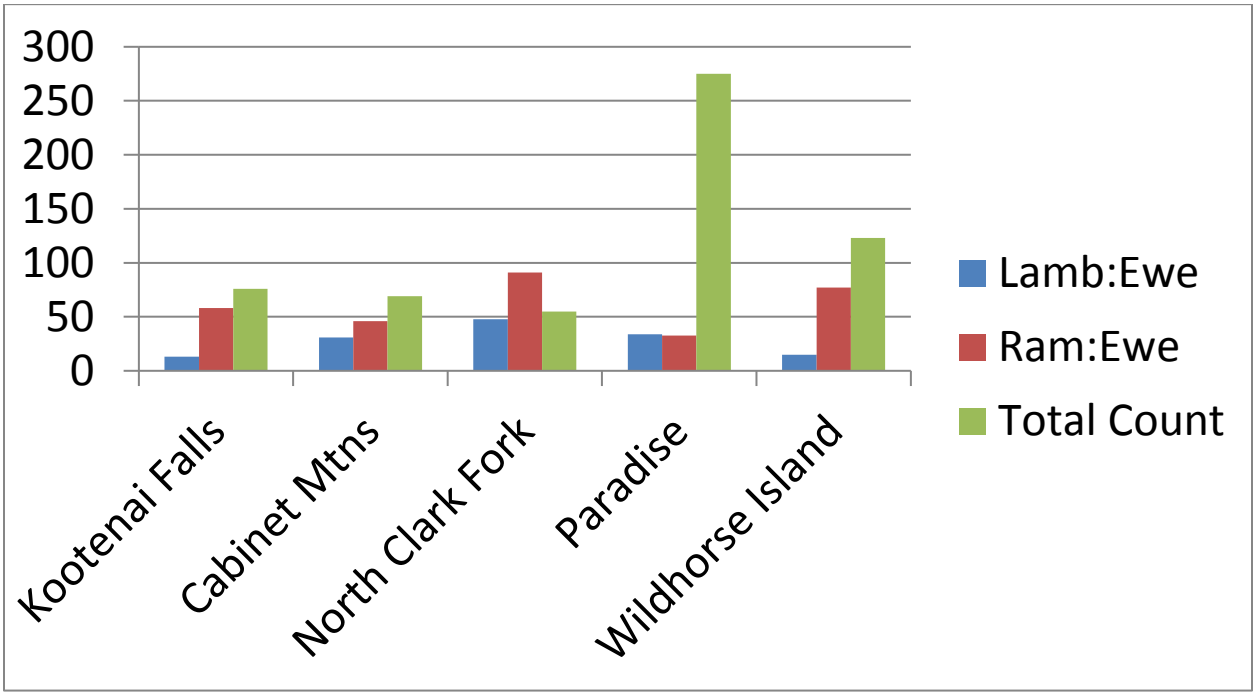


Figure 4. The results from the 2016 spring surveys for bighorn sheep in the Kootenai Falls, Cabinet Mountains, and Wildhorse Island areas of Region 1.

Contact list: Wildlife Staff

Montana Fish, Wildlife and Parks

Region 1

Wildlife Division Staff:

Neil Anderson, Regional Wildlife Manager, Kalispell, nanderson@mt.gov, (406) 751-4585
Kim Annis, Bear Management Specialist, Libby, kannis@mt.gov, (406) 293-4161
Dwight Bergeron, Mitigation Wildlife Biologist, dbergeron@mt.gov, (406) 751-4587
Diane Boyd, Wolf-Carnivore Specialist, Kalispell, dboyd@mt.gov, (406) 751-4586
Tonya Chilton-Radandt, Wildlife Biologist, Libby, tchilton@mt.gov, (406) 293-4146
Jessica Coltrane, Wildlife Biologist, Kalispell, jcoltrane@mt.gov, (406) 751-4584
Cecily Costello, Research Biologist, Kalispell, ccostello2@mt.gov, (406) 751-4583
John Grant, Wildlife Area Manager, Ninepipe, jgrant@mt.gov, (406) 644-2510
Chris Hammond, Wildlife Biologist, Kalispell, chammond@mt.gov, (406) 751-4582
Franz Ingelfinger, Restoration Ecologist, Kalispell, finglefinger@mt.gov, (406) 751-
Tim Manley, Grizzly Bear Management Specialist, tmanley@mt.gov, (406) 892-0802
Jesse Newby, Research Technician, Kalispell, jnewby@mt.gov, (406) 751-4588
Lori Roberts, Research Technician, Kalispell, lroberts@mt.gov, (406) 751-4581
Bruce Sterling, Wildlife Biologist, Thompson Falls, bsterling@mt.gov, (406) 827-4389
Tim Thier, Wildlife Biologist, Trego/Eureka, tthier@mt.gov, (406) 882-4697
Erik Wenum, Bear and Mtn. Lion Management Specialist, Kalispell, ewenum@mt.gov, (406) 756-1776
Alan Wood, Mitigation Program Manager, Kalispell, awood@mt.gov, (406) 751-459